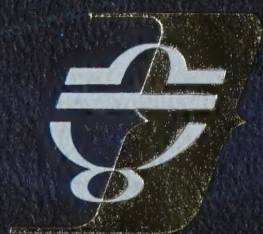


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# DENISON MINES LIMITED

ANNUAL REPORT 1969





The Chairman of  
the Board, President  
and Directors of  
Denison Mines Limited  
are pleased to present  
the Annual Report to  
the Shareholders  
for the year ended  
December 31st. 1969







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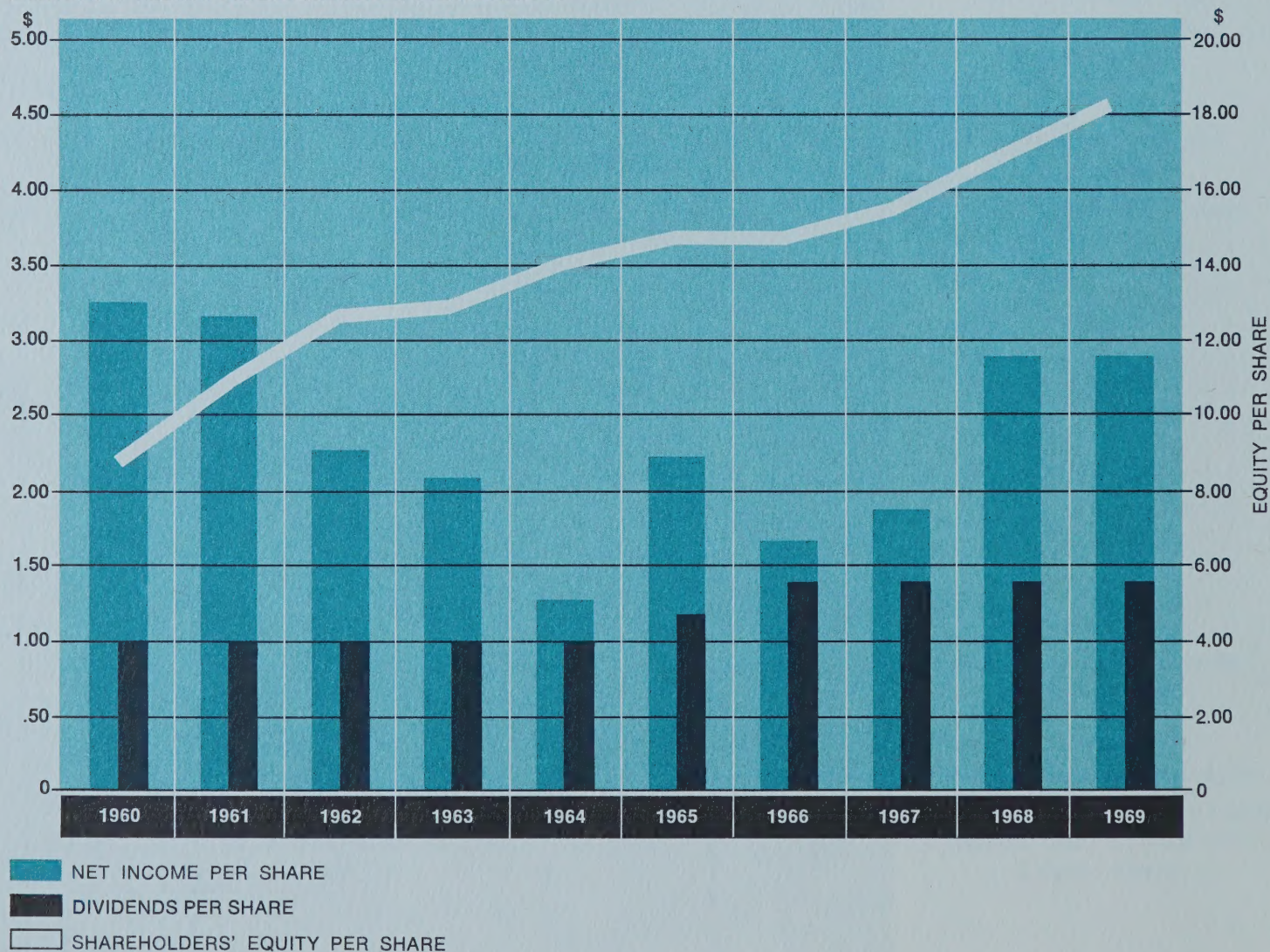


## Highlights For The Year

ENDED DECEMBER 31, 1969

Net Income	\$12,716,822	
Net Income per share	\$ 2.84	
Shareholders' Equity	\$81,901,861	
Equity per share	\$18.30	

## Ten Year Chart on Financial Performance





## Directors

STEPHEN B. ROMAN, K.C.S.G., LL.D.  
Chairman of the Board

JOHN KOSTUIK, B.Sc.  
President

E. B. McCONKEY, C.A.  
Vice-President Finance and Treasurer

JOHN C. PUHKY  
Secretary

J. WILSON BERRY

CHARLES F. W. BURNS

HON. D. KEITH DAVEY

HON. GEORGE A. DREW,  
P.C., C.C., C.D., Q.C., LL.D.

HON. LOUIS DE G. GIGUERE

F. H. JOWSEY

EDWARD A. MERKLE

LOUIS R. PERINI

ANTHONY ROMAN

HON. HARRY A. WILLIS, Q.C.

B. E. WILLOUGHBY



*Board of Directors of Denison Mines Limited convenes in Head Office board room.*

TOP OF PICTURE: Stephen B. Roman, Chairman of the Board.

TO CHAIRMAN'S RIGHT: Hon. Louis de G. Giguere, J. Wilson Berry, F. H. Jowsey, E. B. McConkey, Hon. Harry A. Willis, Anthony Roman.

TO CHAIRMAN'S LEFT: John C. Puhky (standing), John Kostuik, Louis R. Perini, Charles F. W. Burns, Hon. George A. Drew, B. E. Willoughby, John A. Mullin (Counsel).



Subsidiary Company  
of  
Denison Mines Limited

Lake Ontario Cement Limited  
2 Carlton Street, Toronto, Ontario.

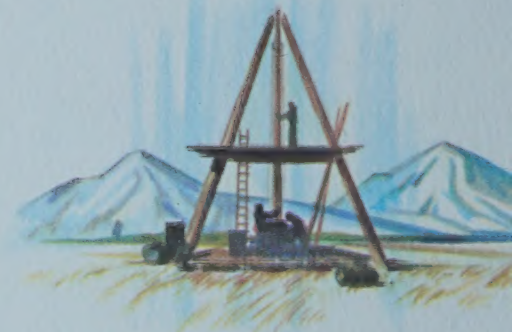
*Division*  
*Premier Concrete Products*  
132 Toro Road, Downsview, Ontario.

*Division*  
*Ryancrete Products*  
210 Detroit Street, Windsor, Ontario.



*Wholly-owned Subsidiary*  
*Rochester Portland Cement Corp.*  
361 Boxart Street, Rochester, N.Y.

*Affiliated Company*  
*Primeau Argo Block Co. Limited*  
Brockport Road at Belfield,  
Rexdale, Ontario.







#### Head Office

4 King Street West,  
Toronto, Ontario.

#### Mine Office

Elliot Lake, Ontario.

#### Vancouver Office

402 West Pender Street,  
Vancouver,  
British Columbia.

#### Calgary Office

201 Oil Exchange Bldg.,  
309-7th Avenue S.W.,  
Calgary, Alberta.

#### Denison Mines (U.S.) Incorporated

1575 Sherman Street, Denver,  
Colorado, U.S.A.

#### Solicitors

Fraser & Beatty,  
Toronto, Ontario.

#### Auditors

Eddis & Associates,  
Toronto, Ontario.

#### Bankers

The Royal Bank of Canada,  
Toronto, Ontario.

#### Registrar and Transfer Agent

Guaranty Trust Company of Canada,  
Toronto, Ont., Montreal, P.Q.,  
Calgary, Alberta.



# Directors' Report to the Shareholders

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As the decade of the sixties closes we can view, in some perspective, the events and decisions that shaped your Company, soundly established its financial strength and developed its mineral resources, plants, manufacturing facilities and organization. During the sixties our basic objectives were to identify opportunities for growth and profit and then to concentrate resources and efforts on them to produce results. This is reflected in the steady growth in assets to over \$100,000,000 from \$71,624,000 in 1960, and in the growth in shareholders' equity to \$18.30 per share, the highest in your Company's history, from \$9.26 per share in 1960. We now enter a new decade of opportunity and growth, and we are most optimistic about your Company's outlook. We intend to seek out and develop opportunities for profitable participation in both new and familiar areas of industrial and mining activities. Many of our current plans are based on our belief that the basis for progress in the seventies must be soundly established by decisions now being made.

We are pleased to report that 1969 was a successful year in all divisions of your Company. Net income was \$12,716,822 and net earnings per share for the year were \$2.84, compared with last year's earnings of \$2.85. This level of earnings was lower than anticipated due to two factors: first, lower investment revenue as a result of adverse investment conditions in the second half of the year; second, a prolonged strike affecting the plant of our sulphuric acid supplier which substantially increased the cost of acid used in our uranium

leaching process. Dividend payments of \$1.40 per share were made in 1969, for a total of \$57,476,495 in payments to shareholders since the first dividend was declared in October 1959.

Although measures to control inflation and economic conditions in North America during the year affected business activities in your Company's areas of interest, each of our divisions effectively contributed to 1969 results.

During the year uranium earnings improved as deliveries on long-term commercial contracts began; an increase in sales and net earnings from cement operations was realized; Oil and Gas division income declined slightly; and revenue from investments continued to make a significant contribution to earnings.

July 1969 was another milestone in your Company's history because it marked the first commercial deliveries of uranium concentrates on a large ten-year contract to supply part of the long-term needs of Japanese electric power companies. Regular deliveries to Japan under the terms of the agreement concluded in December 1967 for the purchase of 21,000,000 pounds of uranium oxide will continue through 1978.

In previous reports to the shareholders we have emphasized the measures taken by your Company to participate to maximum advantage in the growth of the nuclear industry. Our efforts have been concentrated on the improvement of our uranium production capabilities and the search for new uranium deposits in Canada and elsewhere.

In keeping with Denison's policy of improving its leading position in the nuclear fuels field, it is our intention not to limit participation in the nuclear market to production from Elliot Lake reserves. We

believe that part of your Company's resources should be applied elsewhere to opportunities in uranium production, exploration and related activities. Accordingly our interests were broadened in 1968 and 1969 to include several large-scale uranium exploration programs in North America and Guyana.

## Uranium Market Outlook

The year began with concern by manufacturers and utility companies about the effect of construction delays and costs on the production of nuclear power on schedule. During the year, however, there has been ample evidence that these are short-term factors, and that the long-term plans of utility companies continue to rely on nuclear power for a rapidly increasing share of new generating capacity. We fully expect that the forecast of installed nuclear electric capacity for 1980, as reported in last year's Annual Report, will be attained. In fact, the United States Atomic Energy Commission in December 1969 confirmed its median prediction of 150,000 megawatts installed domestic generating capacity by the end of 1980. This latest forecast takes into account the recent effect of slower reactor sales, slippage in construction and improved reactor operating characteristics. The magnitude of the uranium market of the seventies is illustrated by a USAEC estimate that combined foreign and domestic estimated uranium requirements of some 342,000 tons for the period 1970 through 1980 would represent a value of about \$5.5 billion, if  $U_3O_8$  were priced at U.S. \$8.00 per pound.

Because of slippage in reactor construction schedules and the temporary deferment of some new nuclear plant orders, we must re-





**STEPHEN B. ROMAN**  
*Chairman and Chief Executive Officer*

cognize that the probable market pattern will be for uranium supply schedules to be more heavily concentrated in the period 1973-1980 than originally anticipated. Nevertheless, the seventies will be good years for established uranium producers.

In Japan and the industrial nations of Europe there is strong evidence of an accelerating reliance on nuclear power which will

result in an increasing demand for uranium in the seventies. The degree of acceptance of nuclear power in Japan is most encouraging and negotiations for a long term supply contract currently are in progress with Tokyo Electric Power Company, one of the world's largest utilities.

In the United States utility companies are restricted to the use of uranium from domestic resources. The recent suggestion by the United States that Canada seriously consider a continental fuels policy has much merit. Initial Canadian reaction and interest in the proposal has been favourable, because of the vast potential benefits that could result for Canada from a coherent, unified fuels policy.

### **Exploration**

Your Company's present commitment to large-scale exploration programs for uranium and other minerals resulted in intensive activity during the year, with emphasis on areas favourable for uranium. However, a number of the principal areas, particularly in northern Canada, have also good potential for base metals. Exploration projects will be an important part of Company activities during 1970. Active projects now include joint ventures with North American, Italian and Japanese companies as well as ventures wholly financed by your Company. Coal exploration in western Canada, begun in late 1968, made good progress. A property was acquired in Alberta near Rock Lake on which trenching and adit work was done. Other acquisitions will be considered in 1970 and the exploration program will continue.



## Oil and Gas

Profitable operations in the Oil and Gas division continued in 1969, with slight declines in production, revenue and proven reserves. As planned, there was increased exploration activity during



*John Kostuik*  
JOHN KOSTUIK  
President

Toronto, Ontario, January 12, 1970

the year. Much greater activity for the division is planned for 1970.

## Industrial

Sales of cement and cement products by Lake Ontario Cement Limited and subsidiaries improved in 1969 and consolidated net earnings showed an improvement over 1968 in spite of problems in the construction industry. Particular attention was given to increasing the efficiency and capacity of the Picton plant.

In July your Company sold its holdings in Canada Cement Company Limited. The sale of this major investment at a profit resulted in a substantial increase in working capital.

## Government Policy

The White Paper on proposals for tax reform introduced by the government in November proposes radical new conditions for industry and business with manifold effects on personal and corporate investment policies. It is widely recognized that Canada's present taxation policies have been outstandingly successful in encouraging exploration and development of natural resources. The new proposals, however, undervalue the

significance of the incentives which have been so effective in making the industry a strong contributor to the national economy. We believe that the Canadian government, as a first priority, must foster an economic environment in which initiative is recognized through return on effort and risk capital. We believe that the government, in the interest of all Canadians, should be stressing incentives for investment in natural resources development rather than creating an environment which will direct risk capital elsewhere and hinder Canadian economic development. In addition the tax policy must encourage individual savings for investment in the future growth of Canada.

In summary, 1969 has been a good year for Denison and the outlook for 1970 is favourable. Your Company will continue to develop and strengthen its position as a major uranium supplier in international markets and to seek opportunities for growth and profit in all divisions.

The Board of Directors wishes to thank the executives and staff of our organization for their loyalty and contribution to the year's achievements. We wish also to thank our shareholders for their continued interest and support.

On behalf of the Board of Directors

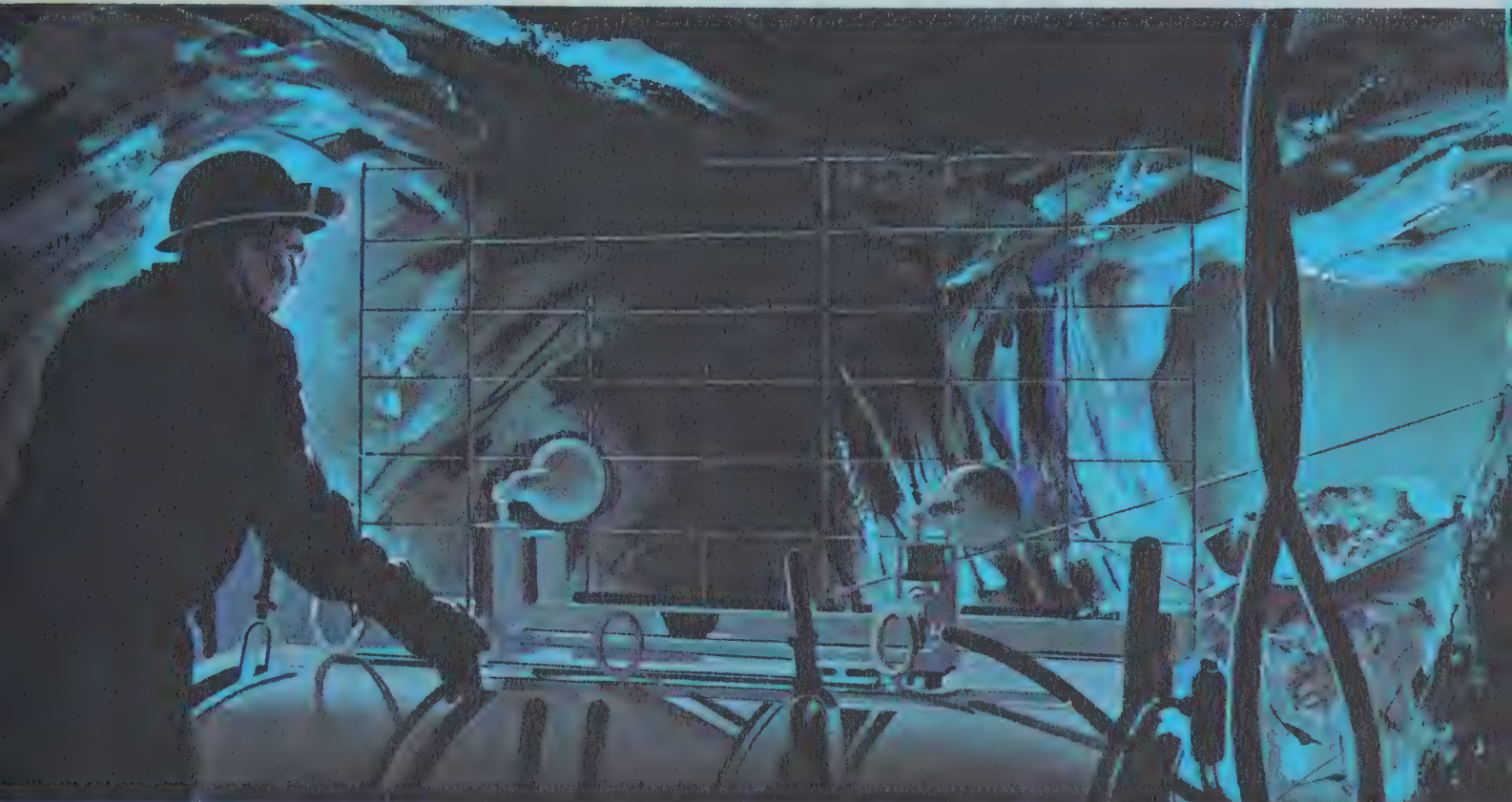
*Stephen B. Roman*  
STEPHEN B. ROMAN  
Chairman of the Board



This marks the thirteenth year of continuous production from the Denison mine. It was a year of progress and accomplishment in the program of preparedness on which much planning and effort has been applied in the past three years. Production of uranium oxide in 1969 reached 4,002,949 pounds,

the highest level since 1963; the average grade, 3.43 pounds per ton, was at a record level, reflecting operations in the newly developed north-east section of the mine. Development of new methods, which were dependent on successful development or adaptation of high capacity mobile units

production rate of other elements. Improved methods developed and introduced over the last three years have been effective, and by year-end eighty per cent of the production tonnage was being handled by new loading and haulage equipment. Several new mobile units of the load-haul type were pur-



*Scraping ore out of a stope*

to Denison mining conditions, has progressed favourably. The major projects undertaken in recent years are contributing most effectively to improving productivity and efficiency of operations.

### **Mine Improvements**

Our continuing objective for underground operations is to improve each element of the mining cycle, and make it increasingly less dependent on interruptions in the

chased during the year and additional high capacity haulage units will be added in 1970.

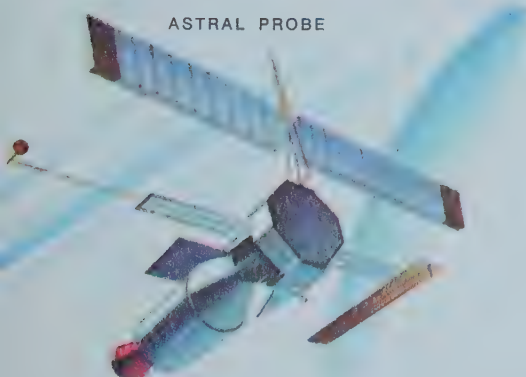
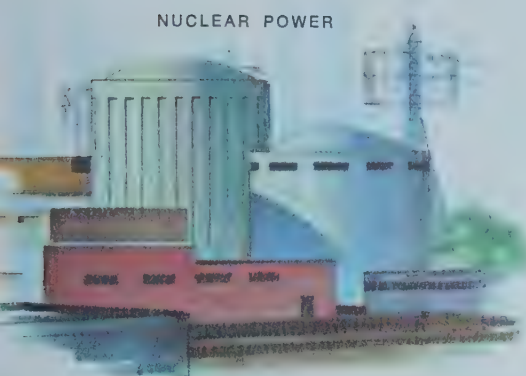
Other improvements in successful operation include:

- the concentration of production activities in the newly developed north-east area of the mine.
- a network of high capacity belt conveyors for transporting ore from the newly developed areas.









- the elimination of production delays at truck discharge points through successful development of an effective mechanical rock breaker.
- more mechanization of mine development and mine service activities.
- more effective use of ventilation facilities.
- an enlargement and modernization of facilities for servicing mine mobile equipment.

### Mine Development

In 1967 and 1968 most exploration and development attention was directed to the east and north-east areas of the mine. A major project, successfully completed in 1968, was a haulageway extending east to the former Can-Met workings. In 1969 an area to the south of the central crusher station was opened for future development by a new artery extending to the south boundary of the mine, and further favourable information on the ore reserves in this area was obtained. Another major mine artery, which later will serve as a conveyorway, was advanced 1,085 feet to the southwest in a new area of the orebody. Both excavations are valuable as main arteries for future operations, as well as providing valuable information for detailed planning of mine development.

### Milling

No major renewal or expansion projects in the surface plant were planned for 1969; however there is much emphasis on a steady improvement of plant facilities and processing methods. This program was particularly effective during the year. Mechanical and metallurgical changes and improvements in operations reduced the consumption of process reagents by ten per cent, and increased both leaching circuit efficiency and uranium recovery. Improvement and reconditioning of concentrator plant equipment is a continuing program on which much progress was made in 1969. Additional cost reductions and improvements in reliability and process control are expected from the process develop-

ment program in 1970. The principal reagents used for uranium extraction are sulphuric acid and lime. After mid-1970 industrial lime will be supplied from the new plant now being built at Spragge, Ontario in which Denison has a 49% interest. The proximity of this plant will reduce the cost of one of our principal reagents. The normal supply of sulphuric acid from Sudbury was interrupted by the long strike of nickel workers during 1969, and substitute supplies had to be obtained elsewhere at excessive cost.

In 1970 there will be an increasing emphasis on research and development in metallurgical aspects of our operations, including research on rare-earth separation. By-product operation was resumed during the year with the production of yttrium oxide. The uranium ore contains more than a dozen unusual elements which can be separated as commercial applications for rare earth oxides develop. Detailed studies were carried out during the year on a program for extending bacterial leaching operations for the extraction of uranium. This form of solution mining is applied at Denison to supplement normal mine production. Production attributable to underground leaching operations is estimated at 210,000 pounds  $U_3O_8$  for the year.

### Nuclear Energy Outlook

1969 was a year of reappraisal in the nuclear industry. It is significant that, in spite of some acknowledged disappointments in reactor construction schedules in the United States, the long-term outlook for installed nuclear generating capacity is most promising. In fact, in a reappraisal taking into account reported reactor sales, slippage in construction and improvements in reactor operating characteristics the United States Atomic Energy Commission has again confirmed its median estimate of 150,000 megawatts installed domestic generating capacity by 1980. This is soundly supported by present evidence; already in the United



States nuclear generating capacity of more than 41,000 megawatts is in operation or being built. Other reactors on order or planned bring the total to over 78,000 megawatts. Thus the projected installed nuclear generating capacity in the United States for 1980 already has more than passed the half way mark. Several additional large nuclear electric plants were announced late in the year, confirming that the competitive advantages of nuclear power are being maintained.

The outlook for nuclear power in Europe, particularly Sweden and Germany, showed improvement during the year. We are confident that the industrial countries of Europe will be a major market for uranium in the seventies. Japan, too, is rapidly turning to nuclear power for its future needs and your Company is well established as a major long-term supplier to the Japanese electric industry. The advantages we can offer, — particularly long continuity of supply and the capability to supply large quantities of uranium — ensure your Company's competitive position in international markets.

During the year there was an increasing recognition of the key role of annual production rates in uranium market projections, whereas consumers previously had centered attention mainly on ore reserves in estimating the mining industry's capability to meet their requirements. The rapid growth in production facilities that will be required in the seventies is shown dramatically by recent estimates by authoritative agencies. Specifically, the present annual output of all world producers is about 23,000 tons of  $U_3O_8$ . Current revised estimates indicate world demand growing to 34,000 tons per year by 1975, 72,000 tons per year by

1980 and 124,000 tons per year by 1985. Estimates by European agencies for world requirements are higher; for the year 1975 for example world demand is estimated at 45,000-60,000 tons  $U_3O_8$ . Whatever the criteria, the mining industry is presented with an enormous challenge to increase production rates in a very short time.

Your Company is well prepared for the market as a result of major development and mine improvement programs in 1969 and previous years. This commitment of a part of Denison's resources has the objectives of:

- providing the capability for expanded production.
- opening large new areas of the mine for development.
- reducing operating costs and offsetting, where possible, rising cost trends through gains in productivity.

### The Breeder Concept

Questions are often asked about the effect of new reactor types on the outlook for uranium producers. Present reactor types, although competitive with fossil-fueled plants, have limitations on the amount of energy which they can extract from uranium. From 1970 these reactors will supply a rapidly increasing proportion of the electric power requirements of the principal industrial nations. However, these requirements will grow so rapidly that in the later years of this century, particularly in the 1990's, efficient reactors of the "breeder" concept will be needed to supplement present types.

In breeder reactors, excess neutrons obtained during plant operations are used to produce more fissionable material than is consumed while, at the same time,

the plant is generating power. A number of breeder reactor types are in the experimental or developmental stage; it is expected that one, possibly three, liquid-metal fast breeder reactor (LMFBR) demonstration plants, 300-500 megawatts in size, will be built in the mid-seventies to develop solutions to difficult design and operating problems. Other breeder types in investigative or early development stages are the molten salt reactor, the gas-cooled fast reactor and the light water breeder reactor.

Commercial application of the breeder concept and the construction of breeder reactors in any numbers are not expected until the late eighties or nineties. They will have to compete economically with conventional reactors which by then will have reached a high degree of sophistication. We can expect that uranium eventually will be supplied for breeder reactors which will be needed to supplement conventional reactors. However, reactors of the present types and improved versions will be the mainstay of the nuclear electric industry for many years. This view was confirmed at a recent industrial conference this year in San Francisco by leading nuclear scientists and officials. Uranium will remain a truly economical fuel, competitive with other energy sources. Competitive advantage and desirability as a clean fuel, coupled with advancing reactor technology, assure it an expanding role.

1969 was a year of accomplishment in the mining division; additional improvements are expected as part of a continuing program and we look forward to strengthening your Company's capabilities in 1970.



# Oil and Gas Division

## Crude Oil (barrels)

	1969	1968
Gross Production .....	929,600	933,022
Daily Rate .....	2,547	2,556
Reserves — proven .....	32,112,000	32,452,600
— probable .....	7,143,000	7,255,800
Total .....	39,255,000	39,708,400

## Natural Gas (cubic feet)

Production .....	439 million	434 million
Reserves .....	28 billion	25.8 billion
Income from Division .....	\$1,801,581	\$1,826,548

Production of crude oil and natural gas was very close to the record levels reached in 1968 by the division. Oil reserves declined slightly, but gas reserves showed improvement. Ninety percent of the oil reserves are located in long life oil fields producing high quality crude oil with a well-head price of more than \$2.73 per barrel. At the current production rate proven re-



*Oil drilling crew in action*



serves have an estimated life of 35 years.

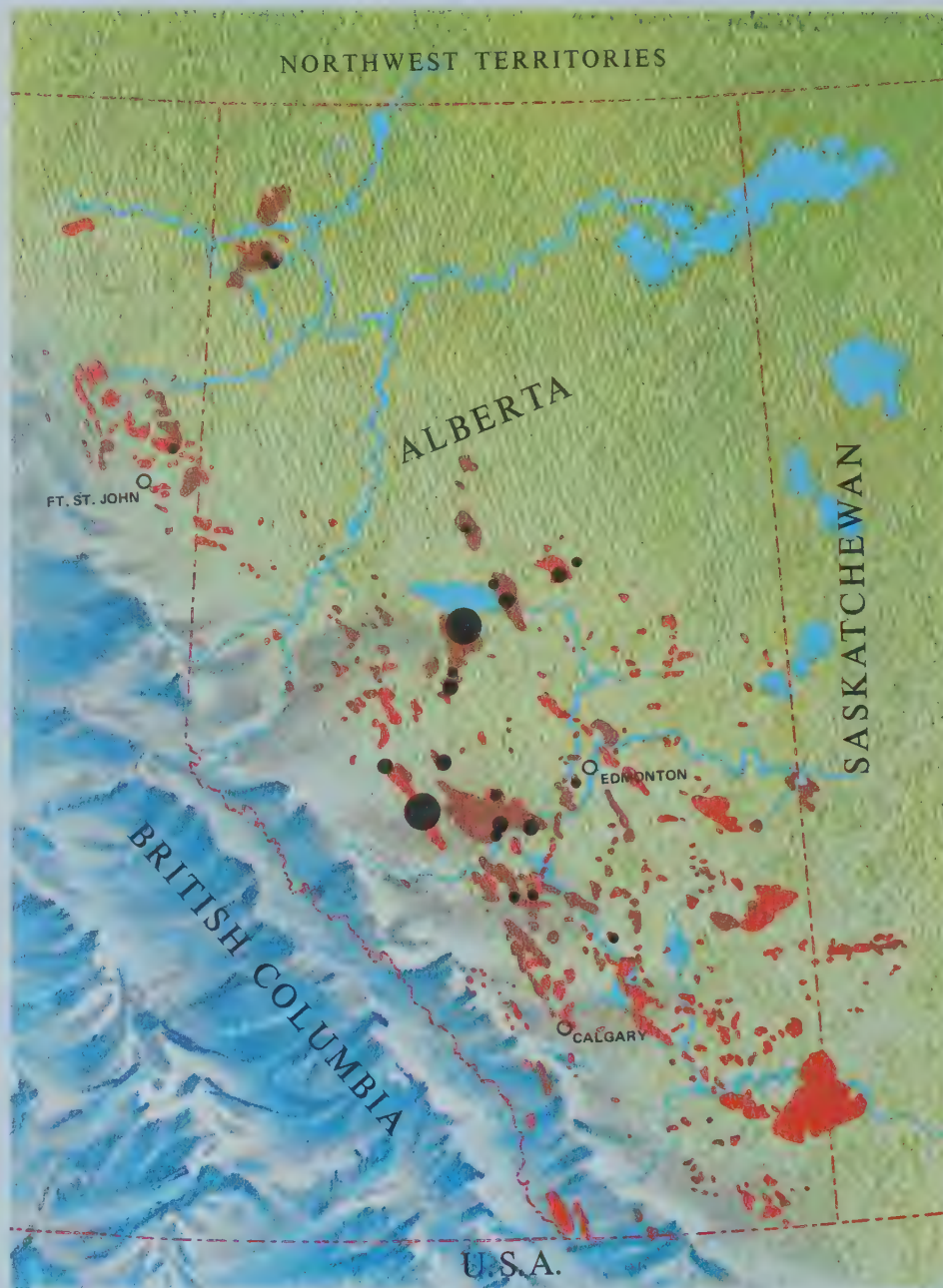
The division was very active during the year and there was an increasing emphasis on exploration. Numerous properties and prospects were investigated. Additional geological review of several promising areas is planned. One natural gas well was drilled and completed on a 1,920 acre lease at Marten Hills and assigned to a gas producing unit.

Acquisitions during the year included a lease in the Rainbow field and a Drilling Reservation of 10,560 acres on trend between the Edson and Brazeau River gas fields in the central foothills area of Alberta. Geophysical surveys have been made on both properties.

Your Company makes extensive use of the principle of unitization for many of its oil wells. Under this arrangement a group of owners pool their wells and reserves into one group or unit with each having an agreed percentage interest. Oil units are usually formed so that a waterflood or other enhanced recovery system can be used to increase recoverable reserves. Because this increase can be in the range of 100 to 300 per cent, unitization of wells and leases can be very advantageous for reserves and for operating costs. In the case of gas units only one gas plant is constructed, one operator appointed and selected wells are brought into production.

Your Company now has interests in fourteen oil units and one gas unit. In addition there are two good producing leases where unitization of production was not feasible.

The outlook for the division in 1970 is good and substantial increases in production, revenue and reserves are anticipated. Drilling of two wells on the Rainbow lease will begin in January; acquisition of several promising areas is planned and exploration activity will be increased.



*Map indicating Denison acreage areas in Alberta and British Columbia*

## OIL AND GAS HOLDINGS IN WESTERN CANADA

- Acreage Areas
- ▲ Oilfields
- ▲ Gasfields



Lake Ontario Cement Limited reported a favourable year and showed improvement over levels set in 1968.

	1969	1968	% Change
Sales .....	\$21,736,000	\$20,931,000	3.8% increase
Net Earnings .....	\$ 1,028,354	\$ 914,737	12.4% increase



*Supplying bulk ready mixed concrete on a construction project*

Cost increases and labour disputes in Lake Ontario's market areas resulted in a decrease in operating earnings. The company's long term debt position again improved with a payment of \$800,000 in December 1969 on the First Mortgage Bonds. The balance of \$800,000 (originally a debt of \$7,000,000) will be paid in December 1970. The original long term debt, including the remaining

5½ % sinking fund Debentures in the amount of \$6,395,000, will be completely repaid by June 30, 1971.

Extensive additions and improvements were made during the sixties to Lake Ontario's original plant at Picton, Ontario. More than \$25,000,000 were invested in the expansion of the Picton plant, supporting storage and distribution facilities, and in the acquisition and



expansion of the ready-mix and concrete block divisions.

#### Operations:

- At the Picton plant improvements for efficiency and for production capacity were made during the year. This included new equipment for quarry operations and a new cement transfer system to service the boat loading silos.
- Premier Concrete Products expanded its operations in 1969 by building a new ready-mix

- Primeau Argo Block Company, Limited, in which Lake Ontario Cement has a substantial interest, operates four concrete block plants in Metropolitan Toronto. As a result of changes completed in 1969, Primeau Argo now manufactures only modular block for the Toronto market.
- Lake Ontario Cement has depots strategically located in New York state and in Ontario which are supplied by water route from the Picton plant. In spite of increased competition, operations in New York state main-

#### INDUSTRIAL LIME

Reiss Lime Company of Canada, Limited, in which Denison has a 49% interest, is building a new plant near Spragge, Ontario on the Trans-Canada highway, midway between Sudbury and Sault Ste. Marie. Limestone and coal will be delivered to the excellent deep water harbour where the company has built a large dock. Production of high quality industrial lime with high calcium content will begin in mid-1970 for use by uranium producers and other industrial users in northern Ontario. The plant, with



*Lime plant facilities  
near Spragge, Ontario*

concrete plant in Burlington, Ontario, and by increasing capacity at its sand and gravel plant at Alton.

- Ryancrete Products, a major producer of ready-mix concrete and autoclaved concrete block in the Windsor area, has plans to build a new ready-mix plant there in 1970.

tained their competitive position during the year.

The long-term and middle-term outlook for the demand for portland cement is excellent. In the short-term some lessening of construction activity is expected; however, Lake Ontario expects to maintain its position in the industry in 1970.

\* \* \*

an initial capacity of 65,000 tons per year, can be expanded as markets develop. This new industry will contribute to industrial progress in that part of Ontario.



1969 was a year of intensive activity for the Exploration Division in the search for uranium, coal and other mineral deposits. To obtain the most effective use of resources of management, technical personnel and funds the division concentrated its efforts in three main lines:

- joint ventures in large scale projects
- investment in other companies with active exploration programs
- projects wholly financed by Denison

The joint venture projects with associated Canadian and major foreign companies were pressed forward during the year. These are multi-phased programs extending over several years with provisions for withdrawal by a participant at the end of a phase. Projects of this type currently are in progress in the Northwest Territories, British Columbia, Saskatchewan, Manitoba, northern Quebec, Wyoming, Montana, Colorado and Guyana.

Exploration projects wholly financed by Denison are being carried out in British Columbia, Ontario, U.S.A., Jamaica and Ireland. Field control and direction is maintained through exploration offices in Toronto, Elliot Lake, Calgary, Vancouver, Denver and Limerick, Ireland.

## Canada

- Work in the Blind River area of Ontario on several large blocks of claims some ten miles southwest of the Denison mine continued in 1969. Some additional claims were acquired and further investigation is planned in 1970. This area is considered favourable for conglomeratic uranium deposits of the Elliot Lake type.

*Denison field  
exploration crew  
at work*





● In the Cambrian Lake area of northern Quebec detailed geological and geophysical investigations supplemented by diamond drilling were carried out during the year to probe an area underlain by radioactive conglomerates. The results have not been sufficiently encouraging to justify any additional work in 1970 under the joint venture agreement for Cambrian Lake with SOMIREN of Italy.

● Project SAM, a joint venture in northern Saskatchewan and northern Manitoba with Roman Corporation, Goldray Mines, Atlantic Richfield and International Mining Corporation, had an active program during the year. The principal targets are uranium and base metals. Airborne surveys completed in 1968 provided the basis for the ground work program of 1969 which included mapping, ground geophysics, prospecting and diamond drilling. It is expected that the next phase of the SAM project will be continued in 1970 to investigate target areas.

● In the Pinehouse Lake area of northern Saskatchewan, a large scale joint venture has been in progress with Roman Corporation, Goldray Mines, Black Hawk Mining and Phillips Petroleum Company. Radiometric, electromagnetic and magnetic surveys were completed but no suitable radioactive zones were found. A number of anomalous areas have been located as targets for detailed surface investigation and drilling for their base metals potential. The scope of the 1970 program and the participation status of the partners is under review.

● In the Eastmain River area of northwestern Quebec Denison is participating in a joint venture with Kennecott of Canada, Anglo-American, and Hudson Bay Mining &

Smelting to search for copper deposits over some 1,599 claims. Preliminary ground work, following airborne surveys, resulted in limited diamond drilling in 1969. Drilling will be resumed early in 1970.

● In the Northwest Territories Denison was active in a joint venture with Roman Corporation, Argosy Mining Corporation and Lakehead Mines. The Henik Lakes area under examination is considered favourable for uranium deposits of the conglomerate type. The program for 1970 presently is under review.

● The iron deposit held in the heart of the Labrador Trough in northern Quebec under an exploration permit remains in good standing. Investigations there have outlined magnetic iron deposits in excess of 1 billion tons of a grade suitable for beneficiation. No further development was undertaken during the year.

● Uranium exploration in a number of areas of British Columbia continued under a joint venture agreement with nine Japanese utility companies. A number of mineral areas were acquired for examination in 1970.

● Denison, under an agreement with Consolidated Rexspar Minerals & Chemicals, is directing an exploration program for uranium and fluorite on the Rexspar property 80 miles north of Kamloops, British Columbia. Results of the program in 1969 justify additional drilling to evaluate the mineral zones. Good fluorite intersections have been encountered and current drilling is extending the fluorite zone. The significance of celestite and molybdenite values which have been encountered also will be assessed and it is expected that the drill program will provide the additional information needed for

defining the mineral zones and their economic potential.

### United States

● In the United States, the search for uranium in the sedimentary basins of the western part of that country was continued. Although the primary thrust of exploration activities in the United States has been toward uranium, several opportunities in other minerals are under review.

● Under the joint venture agreement with nine Japanese utility companies, extensive drilling was carried on in five areas in Colorado. Results from this drilling were sufficiently encouraging to justify additional detailed exploration in four of these areas in 1970.

● In Montana and Wyoming, uranium exploration was carried on under a joint venture agreement with SOMIREN of Italy, a part of the ENI group. Three areas were drilled in 1969. Information developed from this drilling indicates the need for additional exploration for two of these areas. Three additional areas in Wyoming and Montana have been acquired and will be tested in some detail in 1970.

### South America and Caribbean

● In Jamaica, two additional prospecting permits were acquired for a total of six. Copper mineralization will be tested by a diamond drilling program which began in December 1969.

● In Guyana, in a joint venture with SOMIREN of Italy, three large areas 1,000 square miles in extent were retained from the original concession of 1968. Several radioactive areas were outlined by an airborne radiometric survey in 1969. Detailed ground work to investigate anomalous areas began late in the year; additional ground



examination and a diamond drilling program are planned for 1970.

### Ireland

On the Aherlow property in County Limerick drilling during the year was limited. New drilling, however, has indicated a possible major thrust fault. The extensive copper-silver mineralization indicated by the drilling programs of 1967 and 1968 requires additional work before ore reserves can be definitely stated. Several other areas of interest in Ireland also are being examined.

### Coal Exploration

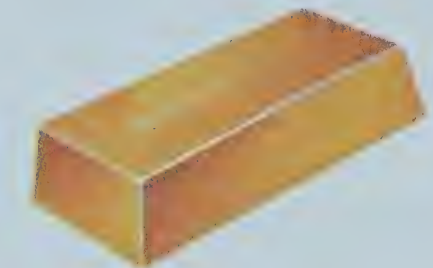
In 1968 your Company's activities were broadened to include coal exploration activities in western Canada. An active program was undertaken in 1969 and a property was acquired in Alberta near Rock Lake, some forty miles south of the Smoky River. Surface mapping, trenching and the driving of adits were done and bulk samples of coal have been obtained for testing for the Japanese steel industry. Large reserves are indicated on the property but results of testing are still pending. During the year a sound base for coal activities in western Canada was established and the Company is now in a good position to consider the acquisition and development of new properties.

The wide-ranging activities of the Exploration Division and the large scale of many of the joint ventures in 1969 have given your Company wide exposure to attractive exploration opportunities for uranium and other minerals. This division will seek new opportunities for exploration in attractive projects and will continue intensive effort on favourable projects now in progress.

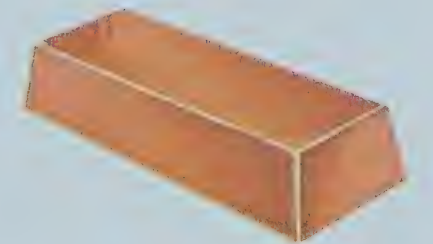
\* \* \*



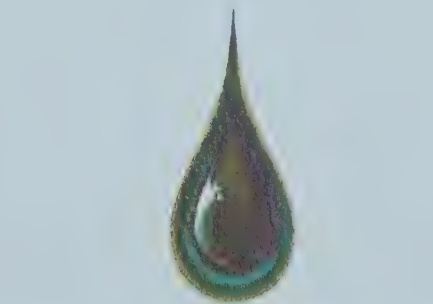
URANIUM



PRECIOUS METALS



BASE METALS



OIL AND GAS

The examination of investment opportunities in the natural resources and other fields continued during the year and investments were adjusted to emphasize those areas where sound values and good growth prospects appeared to exist.

The Company now holds 33% of the common shares of Pacific Tin Consolidated Corporation. The operations of this corporation are closely related to mining and natural resources and include tin dredging in Malaysia, the leading tin producing nation in the world. The corporation is the second largest producer of feldspar products in the United States with mines and plants situated in North Carolina, Georgia and Connecticut. The corporation also has varying interests in diamond and tin dredging operations in Brazil and Portugal, respectively.

A 13% interest was acquired in the common shares of Victoria & Grey Trust Company. This Company provides a broad range of trust and financial services with offices in Toronto and throughout the Province of Ontario.

The Company sold its interest in Canada Cement Company at a price which was consistent with the Company's evaluation of this investment.

Mogul of Ireland, a 75% subsidiary of International Mogul Mines Limited in which your Company has a significant interest, achieved satisfactory operating results during the year at its 3,000 ton per day lead-zinc operation. New Quebec Raglan Mines Limited, in which International Mogul has a 16% interest, is proceeding with shaft sinking and underground development at its nickel property in the Ungava region in the Province of Quebec as part of a 2 year program estimated to cost \$5.6 million.



# Ten Year Summary

(,000 omitted)

## Production

	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960
Tons milled	1,237	1,316	1,220	982	889	1,275	1,587	1,829	2,033	2,014
Average grade (lbs. U <sub>3</sub> O <sub>8</sub> per ton)	<del>3.43</del>	3.07	3.07	2.86	2.93	3.14	3.34	2.88	2.85	2.70
Pounds U <sub>3</sub> O <sub>8</sub> produced	4,003	3,843	3,549	2,749	2,561	3,950	5,079	4,844	5,379	4,912
Crude Oil (bbls)	<del>936</del>	933	924	829	727	560	485	366	19	—
Natural gas (Mcf)	<del>439</del>	434	366	333	315	156	—	—	—	—

## Financial

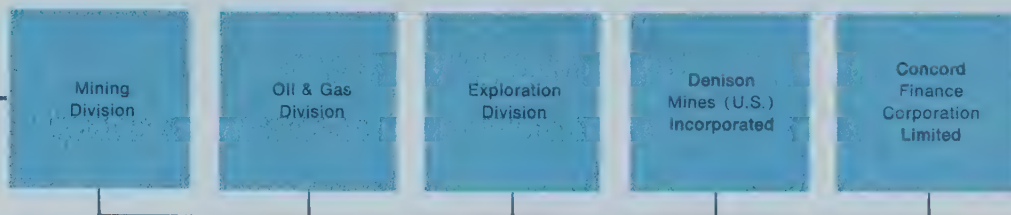
Net income before items shown below*	\$ 4,441	\$ 3,378	\$ 1,350	\$ 2,319	\$ 3,492	\$ 2,434	\$ 7,907	\$ 20,487	\$ 30,525	\$ 28,629
Oil and gas income	<del>1,802</del>	1,827	1,884	1,517	1,375	1,036	864	612	14	—
Revenue from investments (including net gain on sale of securities)	<del>1,000</del>	8,106	5,272	2,852	4,552	1,647	1,210	915	442	311
Provision for depreciation and depletion	<del>1,444</del>	1,039	628	410	509	482	577	11,837	16,851	13,816
Share of net earnings of unconsolidated subsidiary	562	500	611	794	1,091	1,036	—	—	—	—
Net income for the year*	12,717	12,772	8,489	7,072	10,001	5,671	9,404	10,177	14,130	15,124
Net income per share*	<del>2.84</del>	2.85	1.90	1.58	2.23	1.27	2.10	2.28	3.16	3.38
Dividend paid per share	1.40	1.40	1.40	1.40	1.25	1.00	1.00	1.00	1.00	1.00
Number of shares outstanding	4,475	4,475	4,475	4,475	4,475	4,475	4,475	4,475	4,475	4,475
Equity per share*	<del>16.30</del>	16.86	15.41	14.56	14.48	13.74	13.50	12.53	11.30	9.26
Total assets	\$ 110,988	\$ 99,608	\$ 98,447	\$ 84,411	\$ 70,513	\$ 65,203	\$ 65,251	\$ 75,416	\$ 74,427	\$ 71,624

\*After reflecting adjustments in the years to which they apply

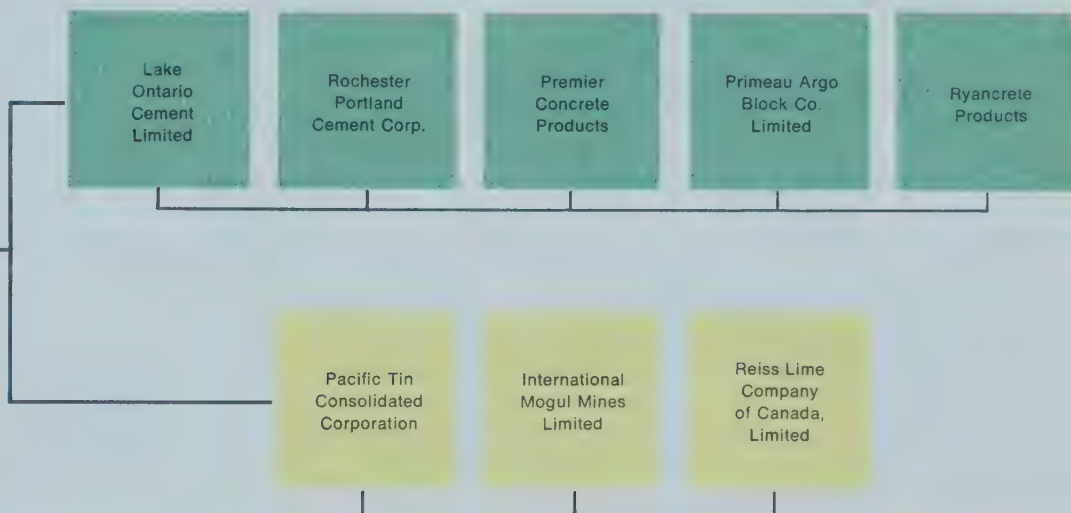


## Major Activities and Diversification

### OPERATING DIVISIONS



### SUBSIDIARIES AND OTHER INVESTMENTS



### EXPLORATION AND DEVELOPMENT

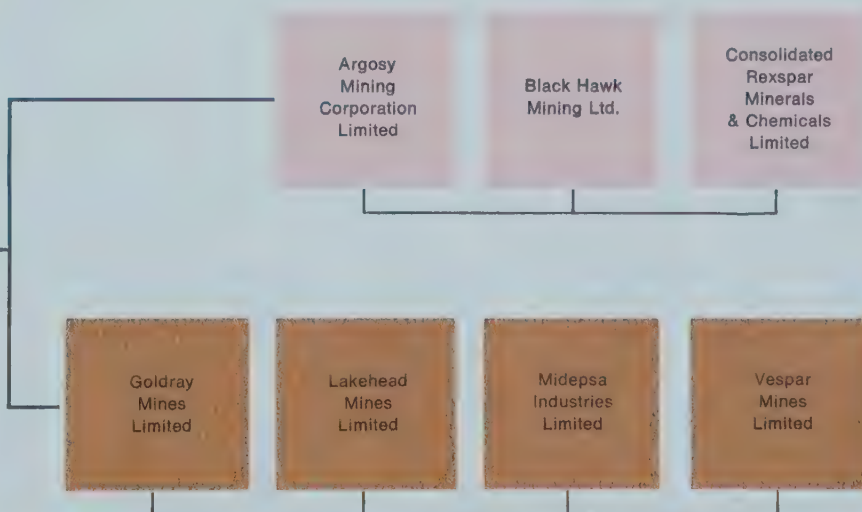


Chart showing the major subsidiaries, associated companies and investments of Denison Mines Limited



# DENISON MINES LIMITED

and its Subsidiaries

## Consolidated Statement of Income and Retained Earnings

FOR THE YEAR ENDED DECEMBER 31, 1969

	1969	1968
Net income before items shown below .....	\$ 7,128,033	\$ 5,516,444
Revenue from investments (Note 10) .....	7,045,918	8,106,355
	<u>14,173,951</u>	<u>13,622,799</u>
Deduct:		
Provision for Ontario mining tax .....	900,000	480,000
Provision for depreciation and depletion (Note 4) .....	1,133,718	1,039,083
	<u>2,033,718</u>	<u>1,519,083</u>
	12,140,233	12,103,716
Profit on sales of fixed assets .....	14,285	167,801
Share of net earnings of the unconsolidated subsidiary .....	562,304	500,203
Net Income for the year .....	<u>12,716,822</u>	<u>12,771,720</u>
Balance of retained earnings at beginning of year .....	67,384,788	66,542,652
	<u>80,101,610</u>	<u>79,314,372</u>
Deduct:		
Dividends .....	6,264,584	6,264,584
Settlement of prior years' European representation costs .....	—	5,665,000
	<u>6,264,584</u>	<u>11,929,584</u>
Balance of Retained Earnings at end of year .....	<u>\$73,837,026</u>	<u>\$67,384,788</u>

## Consolidated Statement of Source and Application of Funds

FOR THE YEAR ENDED DECEMBER 31, 1969

	1969	1968
Source of Funds:		
Current operations — excluding share of net earnings of the unconsolidated subsidiary ..	\$13,273,951	\$13,142,799
Debenture of the unconsolidated subsidiary .....	—	200,000
Investment in other companies .....	6,690,655	1,955,221
Mortgages and other secured loans .....	117,284	6,057,436
Advances on concentrate sales contracts .....	539,648	7,020,000
Special refundable tax .....	—	160,903
	<u>20,621,538</u>	<u>28,536,359</u>
Application of Funds:		
Additions to property, plant and equipment of \$2,423,405		
(1968 \$4,550,054) less proceeds of disposals .....	2,271,156	3,124,939
Concentrates held for sale .....	3,091,276	2,370,141
Settlement of prior years' European representation costs .....	—	5,665,000
Dividends declared .....	6,264,584	6,264,584
	<u>11,627,016</u>	<u>17,424,664</u>
Increase in working capital .....	<u>\$ 8,994,522</u>	<u>\$11,111,695</u>

## Auditors' Report

To the Shareholders,  
Denison Mines Limited.

We have examined the consolidated balance sheet of Denison Mines Limited and its subsidiaries as at December 31, 1969 and the consolidated statements of income and retained earnings and source and application of funds for the year then ended. Our examination of the financial statements of Denison Mines Limited and those subsidiaries of which we are the auditors included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances. We have relied on the reports of the auditors who have examined the financial statements of the other subsidiaries.

In our opinion, subject to the basis of valuation of marketable securities referred to in Note 2 and except that no provision has been made for deferred income taxes (see Note 5), these consolidated financial statements present fairly the financial position of the companies as at December 31, 1969 and the results of their operations and the source and application of their funds for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Toronto, Canada, January 12, 1970.

EDDIS & ASSOCIATES, Chartered Accountants.





# Consolidated Balance Sheet

AS AT DECEMBER 31, 1969

## Assets

### Current Assets

	1969	1968
Cash .....	\$ 706,125	\$ 1,293,907
Marketable securities — at or below cost (quoted market value \$22,649,118; 1968 \$21,120,403) (Note 2) .....	32,615,414	18,283,027
Accounts receivable including concentrate settlements .....	4,793,215	4,535,461
Supplies and prepaid expenses .....	1,261,455	1,201,985
Mortgages and other secured loans .....	693,505	1,371,770
	<u>40,069,714</u>	<u>26,686,150</u>

### Investment in Other Companies — at or below cost

Shares — including shares carried at \$17,174,084 with a quoted market value of \$18,553,525 (1968 \$24,482,550 and \$30,527,240 respectively) .....	18,584,797	25,275,452
Bonds and debentures (Note 3) .....	4,361,625	4,361,625
	<u>22,946,422</u>	<u>29,637,077</u>

Mortgages and Other Secured Loans, not including amount shown above .....	<u>2,216,700</u>	<u>2,333,984</u>
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### Investment in Unconsolidated Subsidiary — Lake Ontario Cement Limited —

Shares — costing \$6,341,298 with a quoted market value of \$6,235,665 (1968 \$6,341,298 and \$10,508,248 respectively) (Note 1) .....	10,890,835	10,328,531
Concentrates Held for Sale — at cost .....	<u>10,558,717</u>	<u>7,467,441</u>

Property, Plant and Equipment at cost less accumulated depreciation and depletion of \$48,576,336 (1968 \$47,735,238) (Note 4) .....	24,306,046	23,154,323
	<u>\$110,988,434</u>	<u>\$99,607,506</u>

## Liabilities

### Current Liabilities

Bank loan — secured .....	\$ 16,200,000	\$12,300,000
Accounts payable and accrued charges .....	2,150,675	2,279,913
Dividends payable .....	145,279	292,000
Provision for Ontario mining tax .....	1,410,971	645,970
Current portion of advances on concentrate sales contracts .....	1,620,000	1,620,000
	<u>21,526,925</u>	<u>17,137,883</u>

Advances on Concentrate Sales Contracts .....	<u>7,559,648</u>	<u>7,020,000</u>
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### Shareholders' Equity

Capital Stock		
Authorized:		
6,000,000 shares of \$1.00 par value each		
Issued and fully paid:		
4,474,703 shares .....	4,474,703	4,474,703
Contributed surplus .....	3,590,132	3,590,132
Retained earnings .....	73,837,026	67,384,788
	<u>81,901,861</u>	<u>75,449,623</u>
	<u>\$110,988,434</u>	<u>\$99,607,506</u>

Signed on behalf of the Board

JOHN KOSTUIK, Director.

D. K. DAVEY, Director.

The accompanying notes to the consolidated financial statements are an integral part thereof.



# Notes to Consolidated Financial Statements

DECEMBER 31, 1969

1. The consolidated financial statements include the accounts of all subsidiary companies and the results of their operations for the year, except that the accounts of Lake Ontario Cement Limited (partly owned) and its subsidiaries are excluded. The investment in shares of Lake Ontario Cement Limited is stated in the consolidated balance sheet at cost plus the Company's share of consolidated earnings of such subsidiary since control was acquired which share, insofar as it related to the current year, is included in the consolidated statement of income. In the Company's view, this method provides the most effective form of presentation of its financial condition.
2. The amount (\$9,966,296) by which the quoted market value of marketable securities is below the carrying value thereof has not been reflected in the accounts as is recommended by the Canadian Institute of Chartered Accountants because it is the Company's view that the decline in market values is a temporary condition and that the current quoted market values do not reflect the intrinsic value of the securities.
3. Included in investment in other companies is an amount of \$2,666,625 in respect of 6½% Series A, Black Hawk Mining Ltd. debentures (face value \$2,735,000) due June 30, 1974, which is secured by the assets of that company and its wholly-owned subsidiary. The security is principally represented by an orebody in Hancock County, Maine, U.S.A. on which extensive development work has been done. The property is presently on a stand-by basis until economic and other conditions are more favourable for production of copper and zinc ores. Interest accrued on these debentures from January 1, 1967 will be taken into revenue when payment is received.
4. Development expenditures made after 1965 for the purpose of preparing mining areas beyond current requirements have been deferred and are being written off in an appropriate manner as such areas of the mine are brought into production. Petroleum and natural gas lease acquisition costs and development expenditures are amortized on the unit of production method based on estimated reserves. Plant and equipment at the Company's mine properties acquired before 1965 was written off in prior years; subsequent additions and all other plant and equipment of the companies are being depreciated over their estimated useful lives.
5. It is estimated that the Company has available for tax purposes deductions sufficient to eliminate current income taxes payable. The Company has not adopted the tax allocation basis of accounting for taxes and, therefore, the accounts do not reflect deferred income taxes to date of \$2,760,000 of which \$2,130,000 is applicable to 1969 (\$1,700,000 to 1968).
6. The Company has received federal and Ontario income tax re-assessments for the years 1961 to 1963 which claim income taxes in the aggregate amount of \$6,273,722 plus interest. The federal re-assessment for 1961 has been appealed to the Exchequer Court of Canada and the Company has filed notices of objection with respect to the other re-assessments. In the opinion of special counsel, the Company should be substantially successful in its appeal and objections. Accordingly, no provision has been made in the accounts for any tax liability which may be exigible as a result of the above re-assessments or for the fiscal years subsequent to 1963 due to transactions similar to those in respect of which re-assessments have been received. Certain assets of the Company have been assigned to the tax authorities as security for part of the outstanding re-assessments pending settlement.
7. The Company has commenced proceedings in the State of Illinois against Michigan Chemical Corporation claiming substantial damages for breach by Michigan Chemical Corporation of a contract for the purchase by it of yttrium oxide. Michigan Chemical Corporation is defending the action and is counter-claiming for three times unspecified damages. The action has not been tried. In the opinion of counsel the action should be successful and the counter-claim is without merit.
8. The Company has guaranteed payment of the liability of a wholly-owned subsidiary as endorser of a promissory note now in the amount of \$612,616 of a borrower and holds as security a debenture constituting a first mortgage and floating charge on the assets of the borrower.
9. Gross operating revenue for the year ended December 31, 1969 increased by 11.7% over 1968.
10. Included in revenue from investments is interest of \$4,409 from the unconsolidated subsidiary and net gain on security transactions of which \$3,460,805 is gain realized from the sale of investment in shares of other companies.
11. Direct remuneration received by the directors and senior officers in 1969 amounted to \$336,067 from the Company and its consolidated subsidiaries and \$6,400 from the unconsolidated subsidiary.







